CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

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SECURITY INFORMATION

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COUNTRY East Germany

SUBJECT SAG Kabel: Scientific Technical Office No. 3 (NTB-3)

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Note: The nomenclature of this office has been very confused. It was formerly subordinate to SAG Avtovelo, when it was known to Germans as WTBG (Wissenschaftliches Technische Buero fuer Geraetebau - Scientific Technical Office for the Construction of Instruments). In 1952, the office was transferred to SAG Kabel and has been variously referred to by SAG Kabel HQ as WTBG, NTB-3 (Nauchnyy Tekhnicheskiy Byuro) or Scientific Technical Office for the Construction of High Frequency Apparatus or just Scientific Technical Office for the Construction of Instruments. It should not be confused with SAG Kabel's NTB-3 of 1951 which was in Elektroapparatewerk Treptow: this was dissolved in 1952. The present office has, it is believed, always been in its present buildings, in spite of its changes of names. It will be referred to in this report as NTB-3.

1. Location

SAG Kabel's NTB-3 is at Berlin-Lichtenberg O 112, Neue Bahnhofstrasse 9-11. (Tel. Berlin 55 53 81).

2. Subordination

NTB-3 is directly responsible to SAG Kabel Headquarters, which is situated at the same address.

3. Organization

a. There is a Russian General director, M.A. Poryadin; for a short time in late 1952, there was also a Russian Ing. Koslov (fnu) in NTB-3, with the rank of director. He had left by the end of the year, however.

25 YEAR RE-REVIEW

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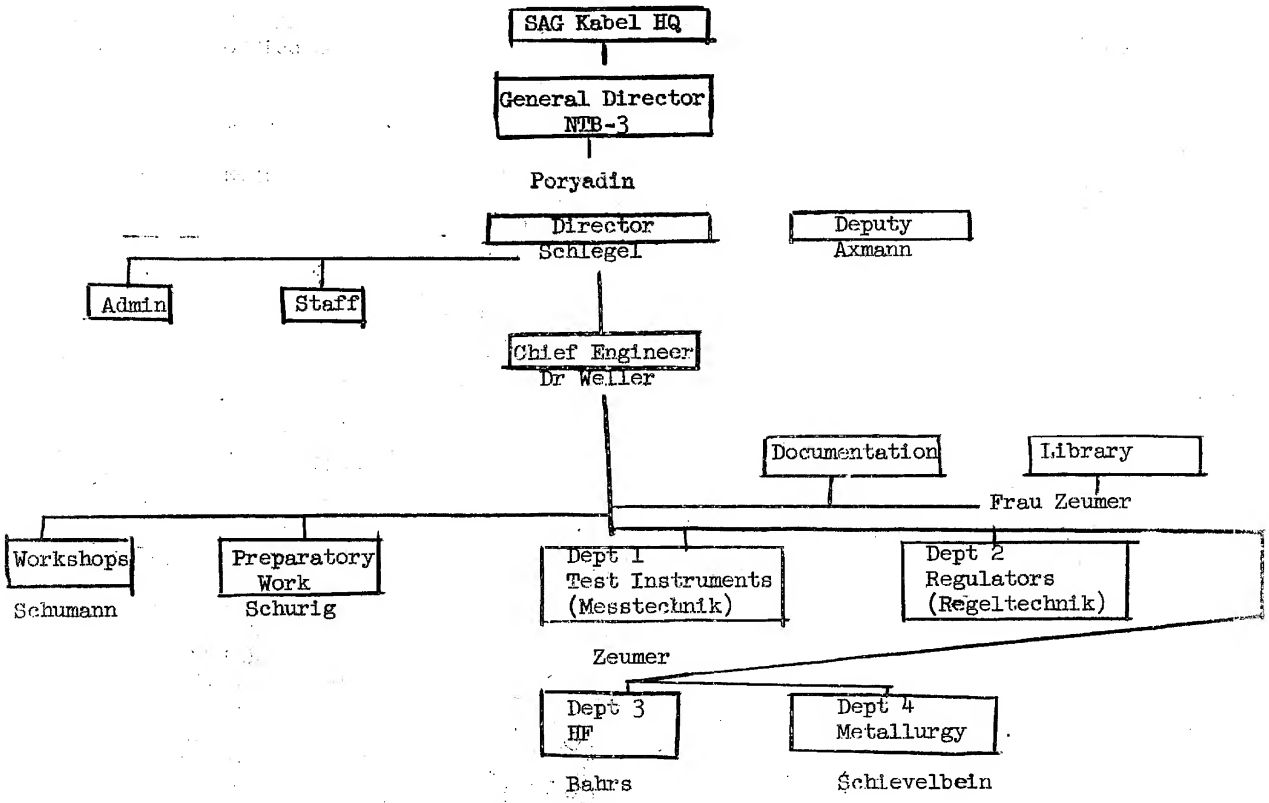
b. NTB-3 has about 400 employees. They are headed on the German side by one Schlegel (fnu), a Balt. He speaks perfect Russian. The deputy director is Axmann (fnu), who at one time was in the USSR for many years.

c. The chief engineer is Dr. Weller (fnu).

d. The organization of NTB -3 may be shown thus:



4. Work of NTB-3

NTB-3 receives development tasks from Moscow, via SAG Kabel Headquarters. These tasks reach the individual laboratories in the form of technical specifications, in the German language, of an instrument or other item to be developed. The technicians in NTB-3 then build one or more samples of the instrument for despatch to the USSR. Extensive descriptions, drawings and instructions for each item are also assembled by the Documentation Section for despatch to the USSR with each instrument: this section employs a number of Russo-German interpreters and translators.

5. Tasks in Progress in December 1952

a. HF Department

1) Development of a spectrometer for the analysis of pulse-modulated HF signals in the range 9 cms to 6 m (50 mcs. to 3,330 mcs.).

2) Development of an apparatus for the analysis of atmospheric disturbances.

3) Development of a power meter, for 9 cms. to 6 m. and up to 500 W. Accuracy 5-10%.

4) Development of a monitoring frame for monitoring 3 transmitters simultaneously (Ueberwachungsgestell).

5) Development of a pulse generator, c. 20 kcs. to 20 mcs., for investigation of ionospheric conditions (similar to work in the Heinrich-Hertz Institute at Berlin-Adlershof).

6) Development of an amplitude meter for UHF.

7) Development of ultrasonic apparatus for material testing.

b. Test Instruments Dept.

Medical apparatus was being developed in this department.

c. Uncertain

The workers in HF Dept. understood in December 1952 that aircraft instruments or apparatus were being developed in other parts of NTB-3, but knew no details.

6. Detailed Example of a Task.

The Russians laid down the following specifications for the development of a spectrometer, on which work was in progress in 1952:

Spectrometer for the analysis of pulse-modulated HF signals in the range 9 cms to 6 m. (50 mcs. to 3,330 mcs.).

a. The apparatus must work from -30° C to +60° C.

b. It must allow for the analysis of pulses of 0.1 - 10 μsec duration.

c. Coaxial 70 ohm input.

d. Max. input power = 500 W.

e. IF amplifier to have bandwifth of about 20 kcs.

f. Sensitivity of IF amplifier not less than 50 μv.

g. An antenna complex for taking HF oscillations to be included.

h. 50 or 400 cycle feed.

i. Visual display of the spectrum (CRT).

j. Photographic recording.

k. Frequency range divided into 3.

l. Weight and power consumption were also defined.

This apparatus appeared similar to the spectrum analyser produced by the American firm of Polarad. Use was made in NTB-3, in developing their spectral analyser, of the work done by OSW in 1948 - 1949 on a 3 to 12 cms. spectral analyser.

7. Economic Difficulties

Although the apparatus must be developed as far as possible from East German materials, certain parts cannot be obtained and members of the staff must be sent to West Berlin to buy them with westmarks. Such items include:

a. Test instruments for ultra-short waves (obtained from Rohde & Schwarz, Munich).

b. Drawn seamless steel tubing.

c. Recently developed vacuum tubes for ultra-short wave and decimeter ranges.

8. Development Difficulties

a. There is a shortage of qualified staff personnel and those employed are not always of the highest quality. They often lack a good theoretical foundation or the possibility of getting it. West German, British and American literature served in most laboratories as a foundation for much of the work.

b. When there was some apparent impossibility in the Russian specifications - as happened from time to time - Russian specialists would come to NTB-3 to discuss the matter. They were believed to have come from the USSR.

9. List of Germans at NTB-3

(Not complete. All names phonetic: some slight corruptions probable).

Axmann (fnu)	Deputy Director.
Bahrs (fnu)	Head of HF Dept. Lives in East Berlin. Formerly with Telefunken.
Ewald (Walter)	HF Dept. Was in the USSR as a specialist (ex Postbox 17).
Gehrisch (fnu)	HF Dept.
Hueber - Kos(s)ey (fnu)	HF Dept. - development of an amplitude meter for ultra-short waves.
Jaeger (fnu)	HF Dept. development of monitoring frame. West Berliner.
Knapp (fnu)	Head of staff section.
Mast, Herbert	HF Dept. - development of a spectral analyser (para 6.). Lives at Apolda near Berlin.
Panniger, Franz	HF Dept. - development of power meter for 9 cms. to 6 m., up to 500 W.

Pocher (fnu)	HF Dept.
Scheunchen (fnu)	HF Dept. Communist.
Schievelbein (fnu)	Head of Metallurgy Department.
Schlegel (fnu)	German director. Balt, with an Italian wife.
Scholz (fnu)	HF Dept.
Schoetz, Otto	HF Dept. - development of ionospheric reflection factor meter. Lives in Teltow.
Schumann (fnu)	Workshops.
Schurig (fnu)	Preparatory work.
Stiessel (fnu)	HF Dept.
T(h)ier (fnu)	HF Dept.
Weller (fnu), Dr.	Chief engineer.
Werner (fnu).	HF Dept. - measurement of the components of an electro-magnetic field.
Wiese, Joachim	HF Dept.
Winkler, Horst	HF Dept. Antenna work.
Zeumer (fnu)	Test Instruments Dept. Head. His wife works in the library.
Zimmermann (fnu)	HF Dept. - pulse generator for c. 20 kcs to 20 mcs.